

VOL. VI.

MARCH, 1908

No. 87

# MYCOLOGICAL BULLETIN

W. A. KELLERMAN, Ph. D

OHIO STATE UNIVERSITY



THE POLAND PRESS, COLUMBUS, OHIO

Entered as Second Class Matter May 11, 1906, at Post Office, Columbus, Ohio

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# Mycological Bulletin

No. 87

W. A. Kellerman, Ph. D., Ohio State University

Columbus, March, 1908

## BY WAY OF EXPLANATION

We are indebted again to Mr. G. D. Smith for an account and a picture of a very interesting thing. When you first find it in some shady place you will be puzzled to know whether it is phalloid, a puff-ball, or "egg" of something else, but it will prove to be a *Phallogaster*.

For the mushroom literature to report in this number we have decided to select Professor Beardslee's interesting comments on the *Lepiotas* of Sweden as compared with related forms in America, an article that was published last year in the *Journal of Mycology*. The mushrooms for the most part are cosmopolitan and studies of material in Europe is therefore apropos,—especially interesting if in the classic ground where Fries, the first great mycologist, collected and studied the species.

The note from the *Youth's Companion* touching a mycological bureau, will be read with interest.

## PHALLOGASTER SACCATUS

G. D. SMITH, AKRON, OHIO.

This plant is rare in the United States. When young it somewhat resembles a tuber or a pear.

When I first met it, I took it at once to be a *Phalloid*, and its general appearance suggested to me the name of "*Phallus tuberosa*", but upon investigation, I found it had previously been given its present name, as printed above.

There has been some doubt about *Phallogaster saccatus* being a phalloid, but a close examination will show the same greenish gleba which, upon decay, gives forth an odor that can not be surpassed by any of the phalloids.

It also has the same spores and the same basidia and deliquesces in the same way. The center is white and somewhat translucent.

When it ripens, this whole central mass deliquesces and disappears, while the gleba also deliquesces, but clings to the inner

walls of the peridium, which soon breaks, giving the insects a chance to scatter the spores. This seems to be done largely by flies and the rove beetle.

The plants vary somewhat in size, from three-fourths inches to two inches in length, and from one-half to one inch in width. The color is light pink, purple or a little lavender in some places.

I have found them in only one locality, and that was in a rich, shady nook near the Cuyahoga river. They grew on the ground or on very much decayed wood, with an abundance of white mycelial threads attached to their base. Twenty or thirty grew close together, but not touching each other.

## NOTES FROM MUSHROOM LITERATURE. XI.

W. A. KELLERMANN.

Careful study of species we know, or pretend to know, is urgently called for today. From the current literature pertaining to mushrooms we have selected the valuable comments on *Lepiotas* by Professor Beardslee, which he studied in Sweden and recorded in a recent number of the *Journal of Mycology*. The article is here reported in full:

"THE *LEPIOTAS* OF SWEDEN.—The following notes on the species of *Lepiota* collected in Sweden by Mr. C. G. Lloyd and the writer during the summer of 1905 may be of interest in connection with the papers upon this genus which are appearing in the *Journal*.

"The number of species collected was not large, probably partly at least because work was necessarily stopped the first week of September. Doubtless other species might have been found in the same collecting grounds if work had continued a few weeks longer. The species detected were six in number, *L. procera*, *naucina*, *rhacodes*, *cristata*, *metulaespora*, and *amianthina*. Of *Lepiota procera* little need be said. It was found in the same surroundings in which it would have appeared in the United States and agreed with our plant in every detail. There is, however, food for reflection in the fact that this fine species which lends itself so well to description and illustration that it is easily recognizable, even by the amateur, has been reported from so many stations and is known to have so wide a distribution. Is it not at least possible that some of its relatives are also widely distributed, but owing to the greater difficulty of their recognition, are not so widely recognized? It is hard for one whose views on 'new species' are perhaps a little 'cranky' to account



otherwise for the facts, for instance, in regard to *L. seminuda*. This pretty species is abundant at Asheville, perhaps the most abundant species of *Lepiota*. Specimens and photographs have been seen by Bresadola, who has verified the determination, and



Fig 287. PHAL-LO-GAS'-TER SAC-CA'-TUS. See article by G. D. Smith.

pronounced it correct in every detail. Still this species, so far as I know, is reported by only one collector, Prof. Morgan finding it at Preston. I greatly suspect that several of our new species will be found, on further investigation to be referable to this abundant and variable species.

"*Lepiota rhacodes* is a beautiful and striking species. As we found it it is large and robust, with a rounded almost hemispherical pileus, whose flesh is remarkably thick and firm, and which is covered with large, strongly revolute scales, which render it very striking. It is at once recognized by the student of the group at first sight. The flesh and gills reddened when bruised as in *L. Americana*, but the red color is not as bright and the change is slower. This species is doubtless rare in the United States. I have never seen anything even approaching it, though it has been found in New England. Cooke's figure is not good, but it will easily be recognized when found from the description.

"*Lepiota naucina* was found only once, but then in some abundance in the parks at Stockholm. It is of course in outward appearance like our own *L. naucinoides*. The main point of interest was the form of the spores, as Fries stated that the spores of his species were round, which has led to the separation of our species, in which the spores are elliptical and apiculate. Upon examination, the spores were found to be identical with those of the American plant, and there can be no question that *L. naucina* as it is at present known to European mycologists, is identical with *L. naucinoides*. It seems hardly probable that the traditional plant has been incorrectly determined. It is much easier to believe that the form of the spores was originally given incorrectly. The species is plentiful in Sweden, and is, so far as I could learn, universally recognized as Fries' species.

"*L. cristata* and *L. amianthina* need no comment. They were in agreement with the plants known by the same names with us.

"The last species to appear at Drottningholm was an old friend, which is abundant at Asheville, and quite generally distributed in the United States. It belongs to a group whose status is at present unsatisfactory, the *Clypeolaria*. Our species need further examination and comparison with well authenticated specimens of the European species before we shall be certain of their identity. The species found is known in Europe as *L. metulaespora*. Fries considered it the same as Bulliard's species, *L. clypeolaria*, and so published it. Bulliard's plant is, however, different. It occurs in Sweden, but is not as common, and in spite of careful search I failed to find it. It is said to have a darker umbo and shorter spores than the true *L. metulaespora*. The plants we found were well marked by their soft appressed tomentose pileus, flocculose veil, and long spores. These were 15-20-





Fig. 288. TRI-CHO-LO'-MA FU-MES'-CENS. A set of specimens by Supt. Hard from his classic ground along Paint Creek, near Chillicothe, Ohio.

x 5-6 mic., and were spindle-shaped. The Asheville specimens have slightly shorter spores, but agree in all other details with the Swedish plants. At Asheville there are three species of *Lepiota* belonging to this group, *L. metulaespora*, *floralis* and a third species upon which I am unwilling at present to express an opinion. Possibly it may prove to be the true *L. clypeolaria*, though it seems at present doubtful. *Lepiota floralis* occurs rarely in open, sandy ground, and seems to correspond well with Ravenel's plant, which was found in his garden, from which he distributed at least three other new species, *L. oligosarcus*, *fulvaster*, and *psilopus*. These are all small species, and from the specimens examined can not be well understood. I have examined two of Ravenel's specimens of *L. floralis*, one in very good preservation at Washington, the other in the herbarium at Biltmore. The spores in the latter were examined and were rather larger than the measurements given by Morgan, being 11-13x-4-5 mic. and spindle-shaped. It is worth suggesting that this species needs further investigation before its status can be considered satisfactory. The conditions under which it is found suggest very strongly that it is only a depauperate form of *L. metulaespora*. An almost unbroken series of forms can be found in this region connecting the two species, and the points of difference are such as may well be explained by the fact that one form is found in sheltered places in woods and the other in sterile, sandy soil, in open places."—H. C. Beardslee, in the *Journal of Mycology*.

We give also a clipping from the Youth's Companion of November 14, 1907:

"MUSHROOMS.—A singular and very interesting and useful institution has been established in the little city of Tarare, near Lyons, France. It is a mycological bureau, where expert judgment is furnished concerning mushrooms brought to it for examination. The country round Tarare abounds with mushrooms, many of which are poisonous. Since the establishment of the bureau nobody buys mushrooms which do not carry its ticket of identification and guarantee, and all the country people from miles around bring their mushrooms for examination. One surprising result has been the discovery of scores of excellent edible mushrooms, which before nobody dared to touch."—The Youth's Companion.





Fig. 289. *Bo-le'-tus fros'-ti-i*. A very striking *Boletus* by reason of its red color (but this fades more or less with age and drying) and reticulated stem. It was first found by Frost in Vermont, but is widely distributed yet apparently not common. Do not eat this species—at least it must first be carefully tested. Specimens from Sugar Grove, Ohio.

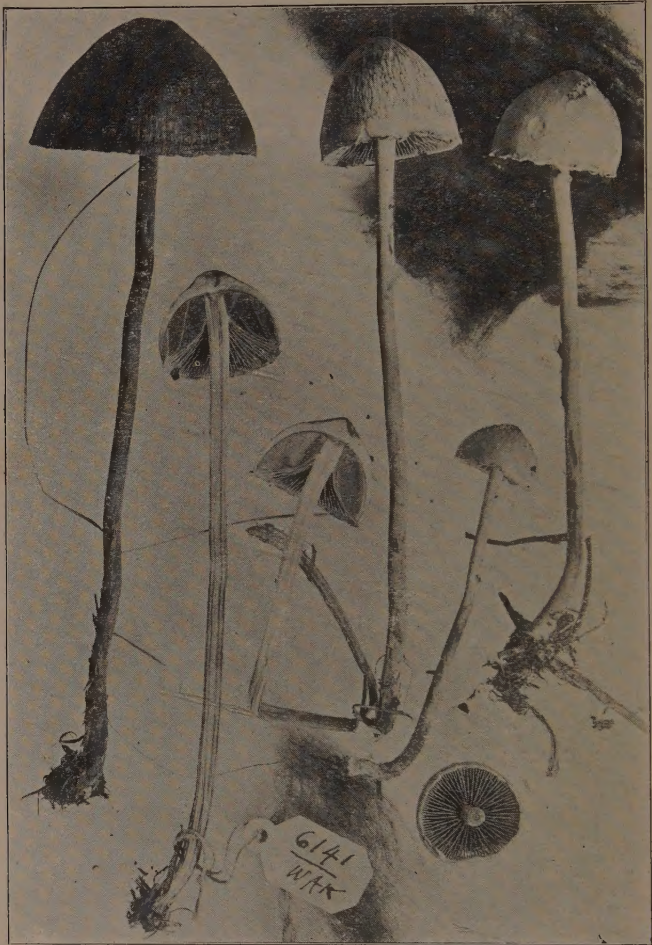


Fig. 290. PAN-AE'-O-LUS CAM-PAN-U-LA'-TUS. A very attractive species, common in rich soil and on horse dung. It is four to six inches high and the cap an inch wide. It is of a brownish color, but with a gray or lead-color tint. McIlvaine advises caution in case it is looked upon with gastronomic intent.

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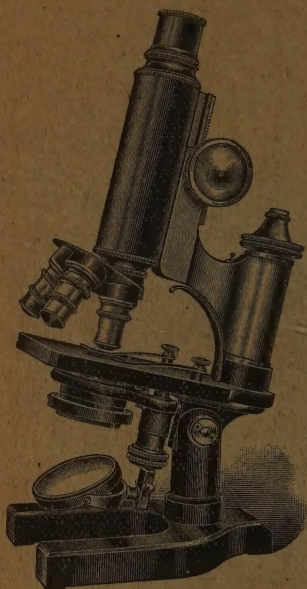
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